

VIII. *Some farther Observations on the Cancer major; communicated in a Letter to Mr. Kleine, Secretary of Dantzick, by Mr. Peter Collinson, F. R. S.*

Read Jan. 24.
1750. **A**S you seem to doubt, that crabs and lobsters cast or shed their shells, tho' I am certain it is fact and truth, I am desirous you should be satisfied from undoubted accounts, which I have procured from my cousin Cooke, who lives in the Isle of Wight, where crabs are in great plenty, and the fishermen very honest people, whom he has known many years, and from whom and his own observations is collected the following account.

That the *cancer major*, and all species of crabs, cast their shells, is certain; but at what season of the year, or how frequently, is not exactly to be determined; but it is believed to be annually at the beginning of the summer, sooner or later, according to the greater or lesser strength of the crab.

If you observe the shell of this creature, you will see in the under part a suture in the form of a crescent, which retains a part of the shell of the same figure. At the time of casting the old shell, this suture opens, and leaves a space sufficient for drawing out the whole body; after which the *thorax* drops its breast-plate, and then the legs quit their crustaceous coverings.

The carcase now is left enveloped with a soft skin like wet parchment. In this helpless state it is incapable



pable of moving, but lies at the bottom of the sea, between the rocks, until its new shell acquires a sufficient hardness and consistence, fit for its defence, and its limbs grow strong enough to bear its weight, and carry it about, to perform its necessary functions ; whilst the old shell is left in two parts, that, which cover'd the body, in one, and that, which cover'd the breast and legs, in another.

It happens sometimes, that the shell hardens prematurely. In this case, the poor animal is made a prisoner, being so cramped, that he cannot disengage himself from his hiding-place, till found by the fishermen, and set at liberty by moving the stones from about him.

It is surprising to consider, how a creature can live long confined without any aliment, and yet increase in its dimensions. But that the crab will subsist without a sensible decay in the fishermens pen-pots *, for the space of some months, is very certain.

The more healthy and thriving a crab is, the more frequently he casts his shell. But, if he becomes sickly, and wasting, the old shell remains on him, until such time as he recovers strength and vigour to cast it.

When the fishermen take a crab, that is not in a good condition, they return it into the sea, and often mark it on the back with a sharp-pointed iron, or top of a knife ; and this mark not only remains on the old shell, as long as it continues on, but is found in the same manner impress'd or serrated on the new.

F shell ;

* These are cages in the sea, made with willow-twigs to keep the crabs in.

shell; a very strange and surprizing phænomenon, but I am assured it is fact.

If a crab receives a small wound in the very extremity of the claw, he generally bleeds to death, or pines away by slow and insensible leaking of the vital moisture.

But if he receives any considerable wound or hurt, that gives him pain, he instantly throws off the offending member, and all is safe (as I have observed in a former account) and a new limb soon succeeds to make it again perfect. The leg is always thrown off at the same joint; the blood is stopp'd by the membrane, that lines that articulation, contracting itself in the form of a purse.

If a crab be brought near the fire, he throws off the legs, which feel a painful heat.

In like manner if a crab be thrown into hot water, he casts off all his legs together. For which reason, when they are to be boiled, they put them into the pot in cold water, and let it warm very slowly, until the creature gradually die.

These, my dear friend, are the principal remarkable, relating to this animal; which being added to those, which some time ago you deliver'd to the Royal Society, and published in their Transactions, will go pretty far in the natural history of this wonderful animal.

I am, my dear friend, with much respect and esteem,

Your affectionate friend,

P. Collinson.

The lobster casts his shell much in the same manner as the river crayfish, which are a species of fresh-water lobsters.